Table 4-3: Analytical Results of Ground Water from Former Coke Plant Area

Analysis/Sample ID	Region 9 PRGs Tap Water (ug/L)	GW-1	GW-2	GW-3	GW-4	GW-5	GW-5D	GW-6
Metals, Total (ug/L)								
Arsenic	--	<10	<10	<10	<10	<10	<10	<10
Barium	2600	<10	60	91	83	51	39	23
Cadmium	18	645	<10	<10	42	<10	<10	65
Chromium	55000 [1]	<10	50	<10	<10	<10	<10	<10
Lead	--	<10	28	20	<10	<10	14	16
Selenium	180	<10	<10	<10	<10	<10	<10	<10
Silver	180	<10	<10	<10	<10	<10	11	<10
Mercury	--	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
SVOCs (ug/L)								
Aniline	120	<50	<500	<50	<50	<50	<50	<250
Acenaphthene	370	29.2	<200	<20	<20	<20	<20	<100
Acenaphthylene	--	<20	<200	<20	<20	<20	<20	<100
Anthracene	1800	<20	<200	<20	<20	<20	<20	<100
Benzoic Acid	150000	<100	<1000	<100	<100	<100	<100	<500
Benzo(a)anthracene	0.092	<20	<200	<20	<20	<20	<20	<100
Benzo(b)fluoranthene	0.092	<20	<200	<20	<20	<20	<20	<100
Benzo(k)fluoranthene	0.92	<20	<200	<20	<20	<20	<20	<100
Benzo(g,h,i)perylene	--	<20	<200	<20	<20	<20	<20	<100
Benzo(a)pyrene	0.0092	<20	<200	<20	<20	<20	<20	<100
Benzyl Alcohol	11000	<40	<400	<40	<40	<40	<40	<200
Bis(2-Chloroethoxy)methane	--	<20	<200	<20	<20	<20	<20	<100
Bis(2-Chloroethyl)ether	0.0098	<20	<200	<20	<20	<20	<20	<100
Bis(2-Chloroisopropyl)ether	0.027	<20	<200	<20	<20	<20	<20	<100
Bis(2-Ethylhexyl)phthalate	4.8	<20	<200	<20	<20	<20	<20	<100
4-Bromophenyl-phenyl ether	--	<20	<200	<20	<20	<20	<20	<100
Butyl benzyl phthalate	7300	<20	<200	<20	<20	<20	<20	<100
4-Chloroaniline	150	<50	<500	<50	<50	<50	<50	<250
4-Chloro-3-methylphenol	--	<20	<200	<20	<20	<20	<20	<100
2-Chloronaphthalene	--	<20	<200	<20	<20	<20	<20	<100
2-Chlorophenol	30	<20	<200	<20	<20	<20	<20	<100
4-Chlorophenyl-phenylether	--	<20	<200	<20	<20	<20	<20	<100
Chrysene	9.2	<20	<200	<20	<20	<20	<20	<100
Dibenzo(a,h)anthracene	--	<20	<200	<20	<20	<20	<20	<100
Dibenzofuran	24	<20	<200	<20	<20	<20	<20	<100
Di-n-butyl phthalate	3600	<20	<200	<20	<20	<20	<20	<100
1,2-Dichlorobenzene	370	<20	<200	<20	<20	<20	<20	<100
1,3-Dichlorobenzene	5.5	<20	<200	<20	<20	<20	<20	<100
1,4-Dichlorobenzene	0.5	<20	<200	<20	<20	<20	<20	<100
3,3'-Dichlorobenzidine	0.15	<40	<400	<40	<40	<40	<40	<200
2,4-Dichlorophenol	110	<20	<200	<20	<20	<20	<20	<100
Diethylphthalate	29000	<20	<200	<20	<20	<20	<20	<100
2,4-Dimethylphenol	730	<20	<200	<20	<20	<20	<20	<100
Dimethylphthalate	360000	<20	<200	<20	<20	<20	<20	<100
4,6-Dinitro-2-methylphenol	--	<100	<1000	<100	<100	<100	<100	<500
2,4-Dinitrophenol	73	<100	<1000	<100	<100	<100	<100	<500

Table 4-3: Analytical Results of Ground Water from Former Coke Plant Area (continued)

Analysis/Sample ID	Region 9 PRGs Tap Water (ug/L)	GW-1	GW-2	GW-3	GW-4	GW-5	GW-5D	GW-6
2,4-Dinitrotoluene	73	<20	<200	<20	<20	<20	<20	<100
2,6-Dinitrotoluene	36	<20	<200	<20	<20	<20	<20	<100
Di-n-octylphthalate	730	<20	<200	<20	<20	<20	<20	<100
Fluoranthene	1500	<20	<200	<20	<20	<20	<20	<100
Fluorene	240	<20	<200	<20	<20	<20	<20	<100
Hexachlorobenzene	0.042	<20	<200	<20	<20	<20	<20	<100
Hexachlorobutadiene	0.86	<20	<200	<20	<20	<20	<20	<100
Hexachlorocyclopentadiene	260	<20	<200	<20	<20	<20	<20	<100
Hexachloroethane	4.8	<20	<200	<20	<20	<20	<20	<100
Indeno(1,2,3-cd)pyrene	0.092	<20	<200	<20	<20	<20	<20	<100
Isophorone	71	<20	<200	<20	<20	<20	<20	<100
2-Methylnaphthalene	--	<20	<200	<20	<20	<20	<20	<100
2-Methylphenol	1800	<20	<200	<20	<20	<20	<20	<100
4-Methylphenol	180	<20	<200	<20	<20	<20	<20	<100
Naphthalene	6.2	<20	1180	<20	<20	<20	<20	1680
2-Nitroaniline	2.1	<100	<1000	<100	<100	<100	<100	<500
3-Nitroaniline	--	<100	<1000	<100	<100	<100	<100	<500
4-Nitroaniline	--	<50	<500	<50	<50	<50	<50	<250
Nitrobenzene	3.4	<20	<200	<20	<20	<20	<20	<100
2-Nitrophenol	--	<20	<200	<20	<20	<20	<20	<100
4-Nitrophenol	290	<100	<1000	<100	<100	<100	<100	<500
N-Nitrosodiphenylamine	14	<20	<200	<20	<20	<20	<20	<100
N-Nitrosodimethylamine	0.0013	<20	<200	<20	<20	<20	<20	<100
N-Nitrosodi-n-propylamine	0.0096	<20	<200	<20	<20	<20	<20	<100
Pentachlorophenol	0.56	<100	<1000	<100	<100	<100	<100	<500
Phenanthrene	--	<20	<200	<20	<20	<20	<20	<100
Phenol	22000	<20	<200	<20	<20	<20	<20	<100
Pyrene	180	<20	<200	<20	<20	<20	<20	<100
1,2,4-Trichlorobenzene	190	<20	<200	<20	<20	<20	<20	<100
2,4,5-trichlorophenol	3600	<50	<500	<50	<50	<50	<50	<100
2,4,6-trichlorophenol	6.1	<20	<200	<20	<20	<20	<20	<100

Notes:

1) Trivalent Chromium

Shaded: Exceeds Region 9 PRG

4.2 Sludge Samples

The analytical results of sludge from 16 locations in the 84-inch Hot Strip Mill sludge basin are presented in Table 4-2. Sludge samples were collected on a grid-system as shown in Figure 4-5. Concentrations of total chromium were higher than the 20:1 dilution factor threshold used to screen potential hazardous constituents, which in the case of chromium is 100 ppm. Total chromium concentrations ranged from 7,560 mg/kg to 13,600 mg/kg. However, analysis indicated that none of the total chromium was present as hexavalent chromium. Sludge pH concentrations were neutral, ranging between 6.47 and 8.00 standard units.

LTV has conducted extensive TCLP testing of this material. Therefore, the TCLP was not conducted on these samples.

4.3 Ground Water Samples

The analytical results of ground water from six locations at the former Coke Plant are presented in Table 4-3. The location of these samples relative to historic structures is shown in Figure 4-6.

Barium was detected at five of the six locations, ranging between 23 µg/L to 91 µg/L. Cadmium was detected at GW-1 (645 µg/L), GW-4 (42 µg/L), and GW-6 (65 µg/L). Chromium was detected at GW-2 at 50 µg/L. Lead was detected at GW-2 (28 µg/L), GW-3 (20 µg/L), in the duplicate sample of GW-5 (14 µg/L), and at GW-6 (16 µg/L). Silver was detected in the duplicate sample of GW-5 (11 µg/L). Cadmium exceeds PRGs where detected.

SVOCs were detected in ground water at GW-1, GW-2, and GW-6. Constituents were restricted to PAH compounds (acenaphthene and napthalene). Acenaphthene was detected at 29.2 µg/L at GW-1. Napthalene was detected at 1,180 µg/L at GW-2 and 1,680 µg/L at GW-6. Napthalene exceeds PRGs where detected.

Field observations noted an odor and sheen on water from GW-3. A sheen was also noted on ground water from GW-6 and an odor was noted at GW-4.

Sec. 3013 [42 USC 6934] Monitoring, Analysis, and Testing

"(a) Authority of Administrators.—If the Administrator determines, upon receipt of any information, that—

"(1) the presence of any hazardous waste at a facility or site at which hazardous waste is, or has been, stored, treated, or disposed of, or

"(2) the release of any such waste from such facility or site may present a substantial hazard to human health or the environment, he may issue an order requiring the owner or operator of such facility or site to conduct such monitoring, testing, analysis, and reporting with respect to such facility or site, as the Administrator deems reasonable to ascertain the nature and extent of such hazard.

"(b) Previous Owners and Operators.—In the case of any facility or site not in operation at the time a determination is made under subsection (a) with respect to the facility or site if the Administrator finds that the owner of such facility could not reasonably be expected to have actual knowledge of the presence of hazardous waste at such facility or site and of its potential for release, he may issue an order requiring the most recent previous owner or operator of such facility or site who could reasonably be expected to have such actual knowledge to carry out the actions referred to in subsection (a).

"(c) Proposal.—An order under subsection (a) or (b) shall require the person to whom such order is issued to submit to the Administrator within 30 days from the issuance of such order a proposal for carrying out the required monitoring, testing, analysis, and reporting. The Administrator may, after providing such person with an opportunity to confer with the Administrator respecting such proposal, require such person to carry out such monitoring, testing, analysis, and reporting in accordance with such proposal, and such modifications in such proposal as the Administrator deems reasonable to ascertain the nature and extent of the hazard.

"(d) Monitoring, Etc., Carried Out by Administrator.—

"(1) If the Administrator determines that no owner or operator referred to in subsection (a) or (b) is able to conduct monitoring, testing, analysis, or reporting satisfactory to the Administrator, if the Administrator deems any such action carried out by an owner or operator to be unsatisfactory, or if the Administrator cannot initially determine that there is an owner or operator referred to in subsection (a) or (b) who is able to conduct such monitoring, testing, analysis, or reporting, he may—

"(A) conduct monitoring, testing, or analysis (or any combination thereof) which he deems reasonable to ascertain the nature and extent of the hazard associated with the site concerned, or

"(B) authorize a State or local authority or other person to carry out any such action,

"and require, by order, the owner or operator referred to in subsection (a) or (b) to reimburse the Administrator or other authority or person for the costs of such activity.

"(2) No order may be issued under this subsection requiring reimbursement of the costs of any action carried out by the Administrator which confirms the results of an order issued under subsection (a) or (b).

"(3) For purposes of carrying out this subsection, the Administrator or any authority or other person authorized under paragraph (1), may exercise the authorities set forth in section 3007.

"(e) Enforcement.—The Administrator may commence a civil action against any person who fails or refuses to comply with any order issued under this section. Such action shall be brought in the United States district court in which the defendant is located, resides, or is doing business. Such court shall have jurisdiction to require compliance with such order and to assess a civil penalty of not to exceed $5,000 for each day during which such failure or refusal occurs.

[§3013 added by PL 96-482]

Sec. 7003 [42 USC 6973] Imminent Hazard

"(a) Authority of Administrator.—Notwithstanding any other provision of this Act, upon receipt of evidence that the past or present handling, storage, treatment, transportation or disposal of any solid waste or hazardous waste may present an imminent and substantial endangerment to health or the environment, the Administrator may bring suit on behalf of the United States in the appropriate district court against any person (including any past or present generator, past or present transporter, or past or present owner or operator of a treatment, storage or disposal facility) who has contributed or who is contributing to such handling, storage, treatment, transportation or disposal to restrain such person from such handling, storage, treatment, transportation, or disposal, to order such person to take such other action as may be necessary, or both. A transporter shall not be deemed to have contributed or to be contributing to such handling, storage, treatment, or disposal taking place after such solid waste or hazardous waste has left the possession or control of such transporter if the transportation of such waste was under a sole contractural arrangement arising from a published tariff and acceptance for carriage by common carrier by rail and such transporter has exercised due care in the past or present handling, storage, treatment, transportation and disposal of such waste. The Administrator shall provide notice to the affected State of any such suit. The Administrator may also, after notice to the affected State, take other action under this section including, but not limited to, issuing such orders as may be necessary to protect public health and the environment.

[§7003(a) designated and amended by PL 96-482; amended by PL 98-616]

"(b) Violations.—Any person who willfully violates, or fails or refuses to comply with, any order of the Administrator under subsection (a) may, in an action brought in the appropriate United States district court to enforce such order, be fined not more than $5,000 for each day in which such violation occurs or such failure to comply continues.

[§7003(b) added by PL 96-482]

"(c) Immediate Notice.—Upon receipt of information that there is hazardous waste at any site which has presented an imminent and substantial endangerment to human health or the environment, the Administrator shall provide immediate notice to the appropriate local government agencies. In addition, the Administrator shall require notice of such endangerment to be promptly posted at the site where the waste is located.

[§7003(c) added by PL 98-616]

"(d) Public Participation in Settlements.—Whenever the United States or the Administrator proposes to covenant not to sue or to forbear from suit or to settle any claim arising under this section, notice, and opportunity for a public meeting in the affected area, and a reasonable opportunity to comment on the proposed settlement prior to its final entry shall be afforded to the public. The decision of the United States or the Administrator to enter into or not to enter into

such Consent Decree, covenant or agreement shall not constitute a final agency action subject to judicial review under this Act or the Administrative Procedure Act.

[§7003(d) added by PL 98-616]